"WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE."

Technics
by Panasonic

DIRECT DRIVE AUTOMATIC PLAYER SYSTEM

SL-1300

OPERATING INSTRUCTIONS

Read these instructions completely, before operating this set.

We want to thank you for selecting the SL-1300, DIRECT DRIVE AUTOMATIC PLAYER SYSTEM.
For optimum performance, we recommend that you read these instructions carefully.

1 PARTS IDENTIFICATION AND OPERATION OF FUNCTIONS

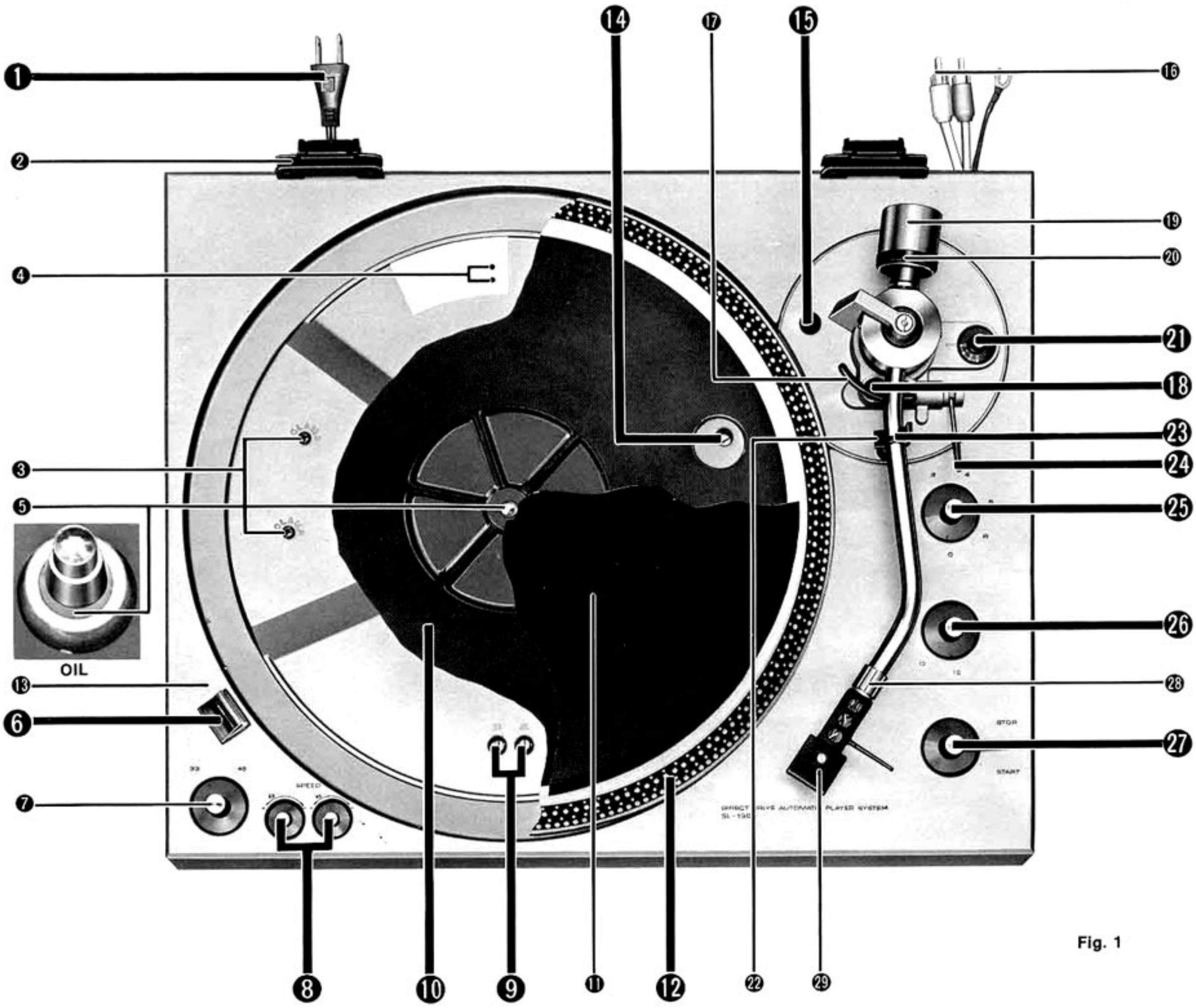

Fig. 1

❶AC power plug
❷Hinges
❸Transit screws (for transformer)
❹Screwing holes for transit screws
❺Motor shaft (turntable shaft)
❻Strobo illuminator/pilot lamp
❼Speed selector
❽Variable pitch controls
❾Speed adjustment screws
❿Turntable platter

⓫Turntable sheet
⓬Strobo dots
⓭Strobo mark
⓮Tonearm return adjustment screw
⓯Stylus set-down adjustment screw
⓰Output terminals
⓱Arm lift
⓲Arm lift adjustment screw
⓳Balance weight
⓴Stylus pressure ring

㉑Anti-skating force control knob
㉒Arm rest
㉓Arm clamp
㉔Cueing lever
㉕MEMO-REPEAT knob
㉖Record size selector
㉗Start/stop lever
㉘Locking nut
㉙Head shell

❶ AC POWER PLUG

Never connect the AC power plug until assembly has been completed!

❻ STROBO ILLUMINATOR/PILOT LAMP

This dual-function illuminator is lit only when the player is "**on**" and the turntable platter is rotating.

❽ VARIABLE PITCH CONTROLS

Turn this knob clockwise or counterclockwise, as necessary, to reduce or increase the rotational speed of the turntable.

Clockwise rotation **(+ direction)** ...This increase the speed of the turntable platter. Rotate clockwise if the strobo dots seem to be "**falling back**"; i.e., seem to be moving counterclockwise. When the dots appear to be stationary, turntable speed is accurate.

Counterclockwise rotation **(− direction)** .. This decreases the speed of the turntable platter. Rotate counterclockwise if the dots seem to be "**running ahead**"; i.e., seem to be moving clockwise, until they appear stationary.

Each of the two turntable speeds (33-1/3 and 45 r.p.m.) can be adjusted within a range of 10%.

❾ SPEED ADJUSTMENT SCREWS

If, for any reason, the adjustment cannot be successfully made by the variable pitch controls, turn these screws clockwise or counterclockwise with a (−), tip screw driver.

Clockwise .....The rotation of the turntable platter will be slowed down.

Counterclockwise... The rotation will be speeded up.

After the adjustment has been made, the speed will not change and re-adjustment will not be necessary.

❿ TURNTABLE PLATTER

The turntable platter of this set also works as part of the rotor of the motor. Never remove the turntable platter unnecessarily. Never stick dust or iron filings to adhere to the magnet rotor.

⓬ STROBO DOTS

These strobo dots, set on the tapered rim of the turntable platter to make strobo reading easier, are divided into four rings (33-1/3 and 45 r.p.m.) at 50 Hz and 60 Hz AC as follows:

45 r.p.m. at 50 Hz
33-1/3 r.p.m. at 50 Hz
45 r.p.m. at 60 Hz
33-1/3 r.p.m. at 60 Hz

⓮ TONEARM RETURN ADJUSTMENT SCREW

In some cases, the tonearm will tend to return to its rest position before the record has finished playing. In other cases, it will to return to the rest position even after the record has finished. Rotation of this screw in the proper direction will correct either condition.

Clockwise rotation ...The tonearm will return to rest later.

Counterclockwise rotation...The tonearm will return to rest earlier.

⓯ STYLUS SET-DOWN ADJUSTMENT SCREW

To be adjusted if the tonearm fails to set down at the right starting point at the beginning of the record. For access to the screw, a rubber cap above it must be removed.

Clockwise rotation ...This will move the set-down point outward, away from the record center.

Counterclockwise rotation...This will move the set-down point inward toward the record center.

⓲ ARM LIFT ADJUSTMENT SCREW

When the tonearm is removed from the record surface via the tonearm lift, the space between the stylus tip and the record surface should be between 5 and 10 mm (between 3/16" and 25/64"). If this height needs adjustment, turn the screw along the center of the arm lift bar. Pushing down on this curved bar will make the screw accessible.

Clockwise rotation ...Arm height lowers.

Counterclockwise rotation...Arm height raises.

㉑ ANTI-SKATING FORCE CONTROL KNOB

Turn this knob to the same number as the stylus pressure ring indicates.

Skating force is the frictional force caused by contact between the tip of the stylus and the record groove, and is applied to the stylus as a side pressure depending upon the relationship of the geometrical position of the tonearm.

This force results in an unbalance of the contact pressure between the stylus tip and each groove wall of the record, an increase of distortion, a decrease of separation characteristics and abnormal wear of the stylus tip and the record grooves.

For this reason, it is necessary to compensate this skating force. This anti-skating force mechanism performs this compensation function.

The quantity of anti-skating force is in proportion to the stylus pressure and, therefore, it should be adjusted according to the stylus pressure.

㉓ ARM CLAMP

Be sure to release the arm clamp before operating the start/stop lever.

㉔ CUEING LEVER

Move this lever downward or upward, then the tonearm will descend or ascend on the record surface.

Downward movement...The tonearm will descend slowly on the record surface and resume playing in the same groove.

Upward movement..... The tonearm will raise from the record surface and interrupt playing.

㉕ MEMO-REPEAT KNOB

Set this knob to the desired number of times you want.

(**R**) is continuous play.

㉖ RECORD SIZE SELECTOR

Set this knob to the diameter of the record to be played.

㉗ START/STOP LEVER

Pull this lever for automatic start and stop functions.

NOTE

If the MEMO-REPEAT knob is set to the other positions than (**O**), then the unit will not shut off and will continue playing until the times which you set.

2 BEFORE USING

❶ CHECK THE PARTS

Player unit	1
Turntable platter	1
Turntable sheet	1
Dust cover	1
45 r.p.m. adaptor	1
Special oil	1
(−) tip screw driver	1
Screws (for cartridge) (long)	2
Screws (for cartridge) (short)	2
Auxiliary weight	1

❷ REMOVE THE TRANSIT SCREWS

Remove the two screws for transformer and place them in the screwing holes for future use, as when the player must again be transported.

❸ APPLY TWO OR THREE DROPS OF OIL TO THE MOTOR SHAFT

To lubricate, open the tip of the vessel with a needle, and apply two or three drops of oil to the motor shaft. (See Fig. 1)

❹ REMOVE THE PROTECTING COVER OF THE ROTOR OF THE TURNTABLE PLATTER

NOTE

NEVER CONNECT THE AC POWER PLUG UNTIL THE ASSEMBLY HAS BEEN MADE!

3 HOW TO ASSEMBLE

INSTALLATION OF THE TURNTABLE PLATTER

Install the turntable platter to the motor shaft.
Place the turntable sheet on the turntable platter.

NOTE

This set is especially designed for a direct drive player system. Therefore, the rotor, which is rotating part of the motor, is connected directly to the turntable platter. (The magnet of the motor is attached to the turntable platter).
For this reason, to maintain the high performance described in the specifications, care should be taken to prevent any dust or iron filings from getting into and adhering to the magnet. Also avoid dropping the turntable platter onto a hard surface, as this may break the magnet.

INSTALLATION OF THE CARTRIDGE

Connect the lead wires to the cartridge terminals.

White (**L** +)...Left channel + Red (**R** +)... Right channel +
Blue (**L** −) ...Left channel − Green (**R** −) Right channel −

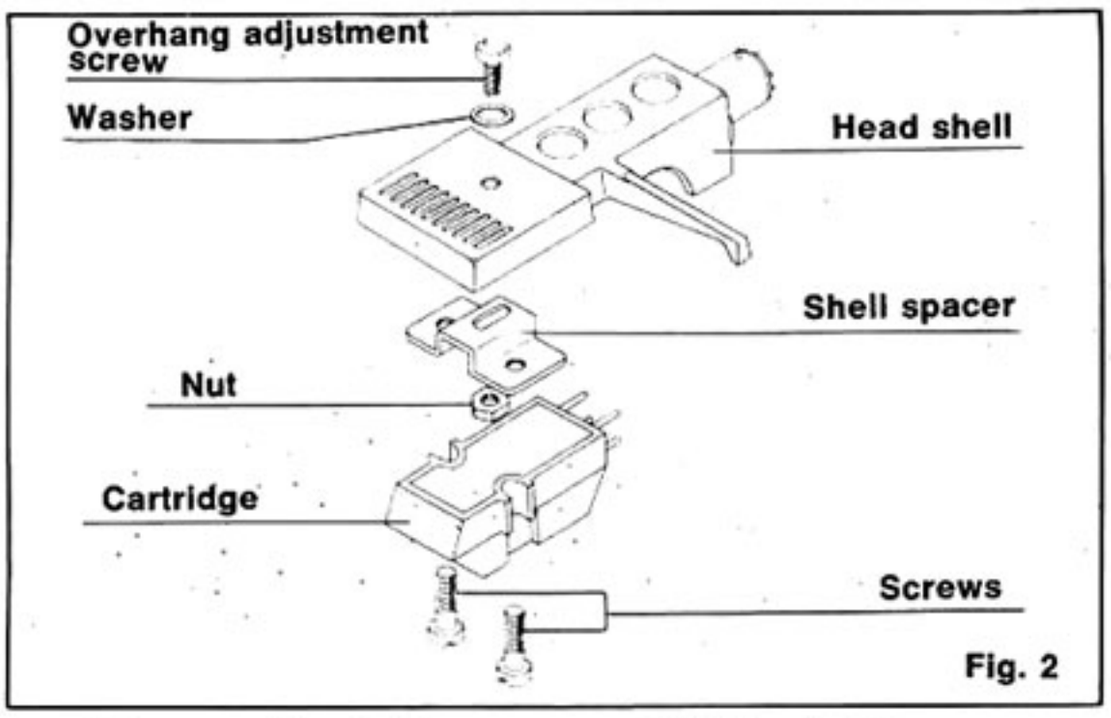

Fig. 2

Install the cartridge to the spacer, and tighten it with screws.
Adjust the overhang position so that the spacing between the stylus tip and the plug is 52 mm (2-1/16"). **(See Fig. 2, 3)**
Insert the head shell in the end of the tonearm, and secure firmly by turning the locking nut.

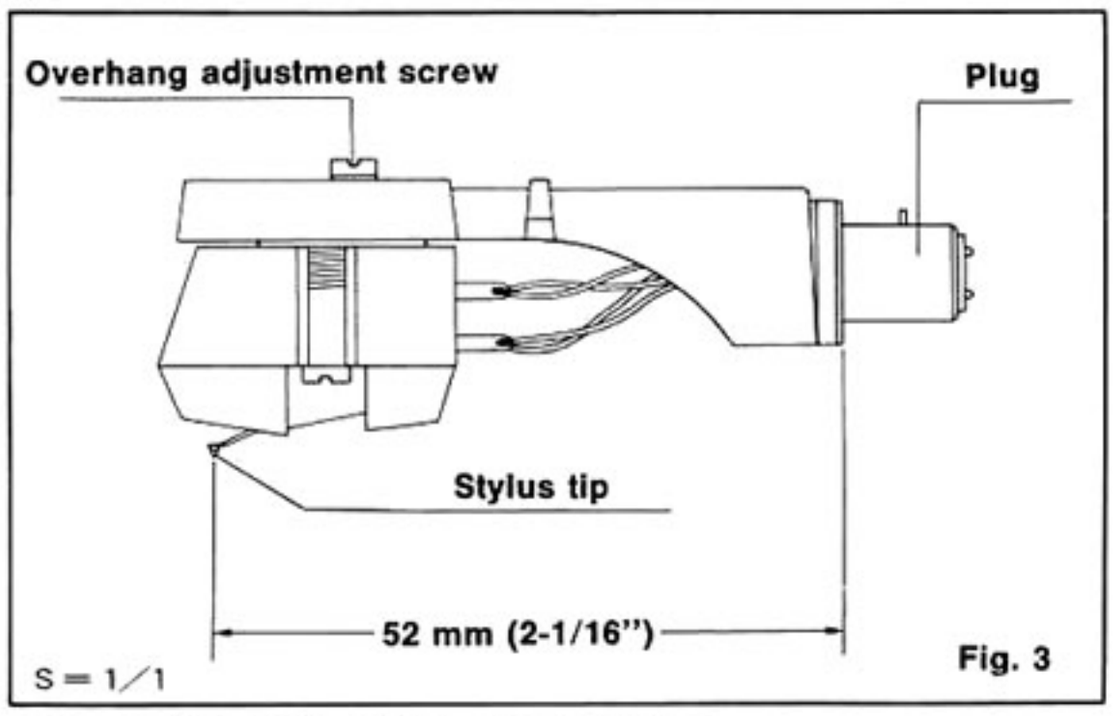

Fig. 3

ADJUSTMENT OF THE HORIZONTAL BALANCE

Insert the balance weight on the rear shaft of the tonearm by turning the balance weight.
Release the arm clamp, and turn the balance weight forward or backward until the tonearm is approximately balanced (stylus pressure is "**O**"). **(See Fig. 4)**
When horizontally balanced, set the stylus pressure ring to "**O**" position, pushing gently with fingers, so that the balance weight is not moved. **(See Fig. 5)**

Turn the balance weight forward to set the stylus pressure ring to the proper stylus pressure of which you use.

NOTE

If the weight of the cartridge is over 8.5g, mount the auxiliary weight to the rear shaft of the tonearm.
Stylus pressure ring moves to gear with balance weight so that it is possible to set the stylus pressure ring to the desired position by turning the balance weight.

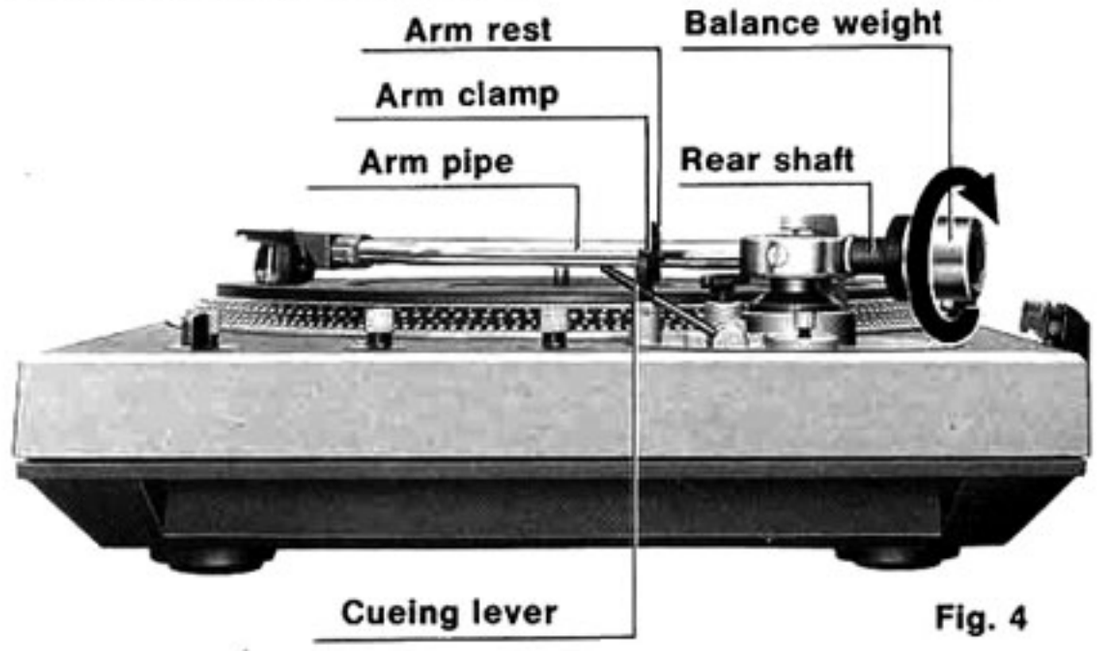

Fig. 4

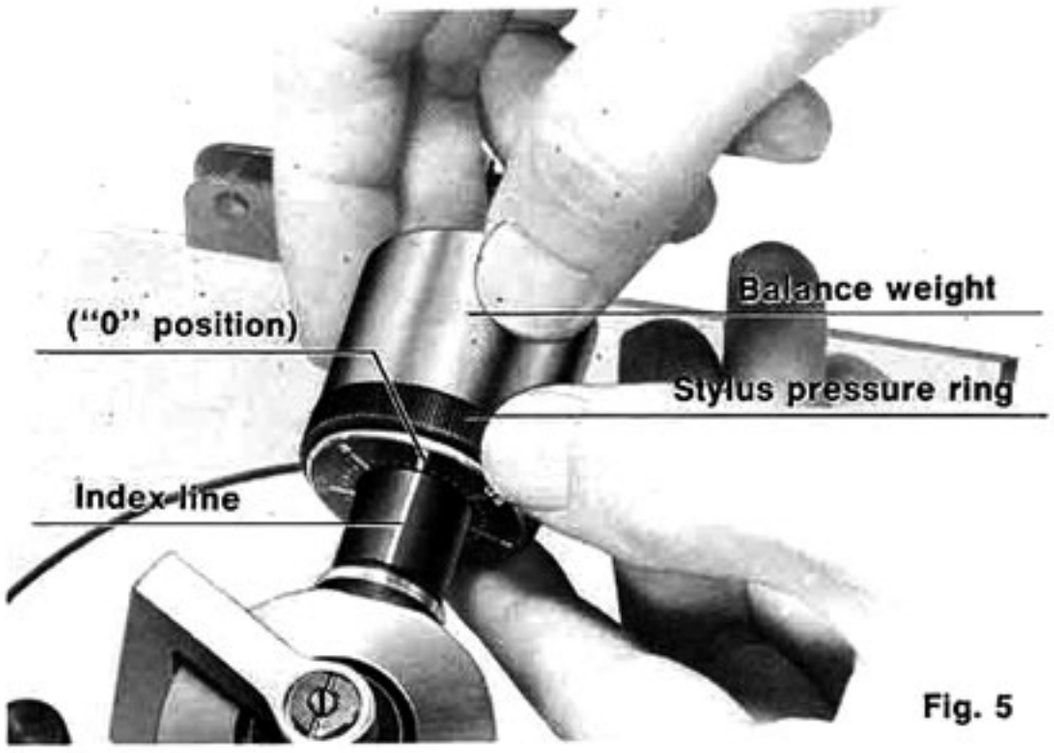

Fig. 5

ADJUSTMENT OF THE ANTI-SKATING FORCE

Turn this knob to the same number as the stylus pressure.

INSTALLATION OF THE DUST COVER

Raise the dust cover upward and place it securely in the hinges.

NOTE **(See Fig. 6)**

We recommend that you take off the dust cover, if the dust cover becomes the cause of "**HOWLING**" from the vibration of the speakers.

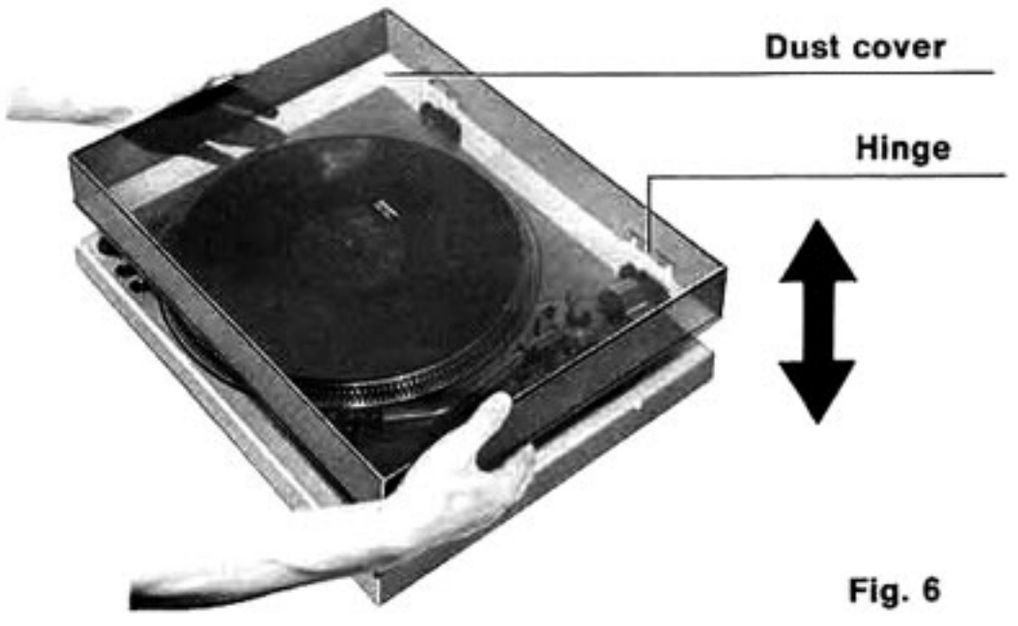

Fig. 6

4 PLACEMENT

❶ **Use the player in a stable and horizontal position, where there is little or no vibration.**

❷ **Use the player as far away from the speakers as possible and isolate the player from sound radiation from them.**
This player is equipped with audio-insulators and designed for the utmost absorption of vibration.
If the speakers are placed too near the player, sound vibration may be transmitted to the tonerarm and result in "**HOWLING**". Place the player as far away from the speakers as possible.

❸ **Do not place the player where it is exposed to direct sun, dust or moisture**.
Also keep away from heating equipment in order to protect the dust cover.

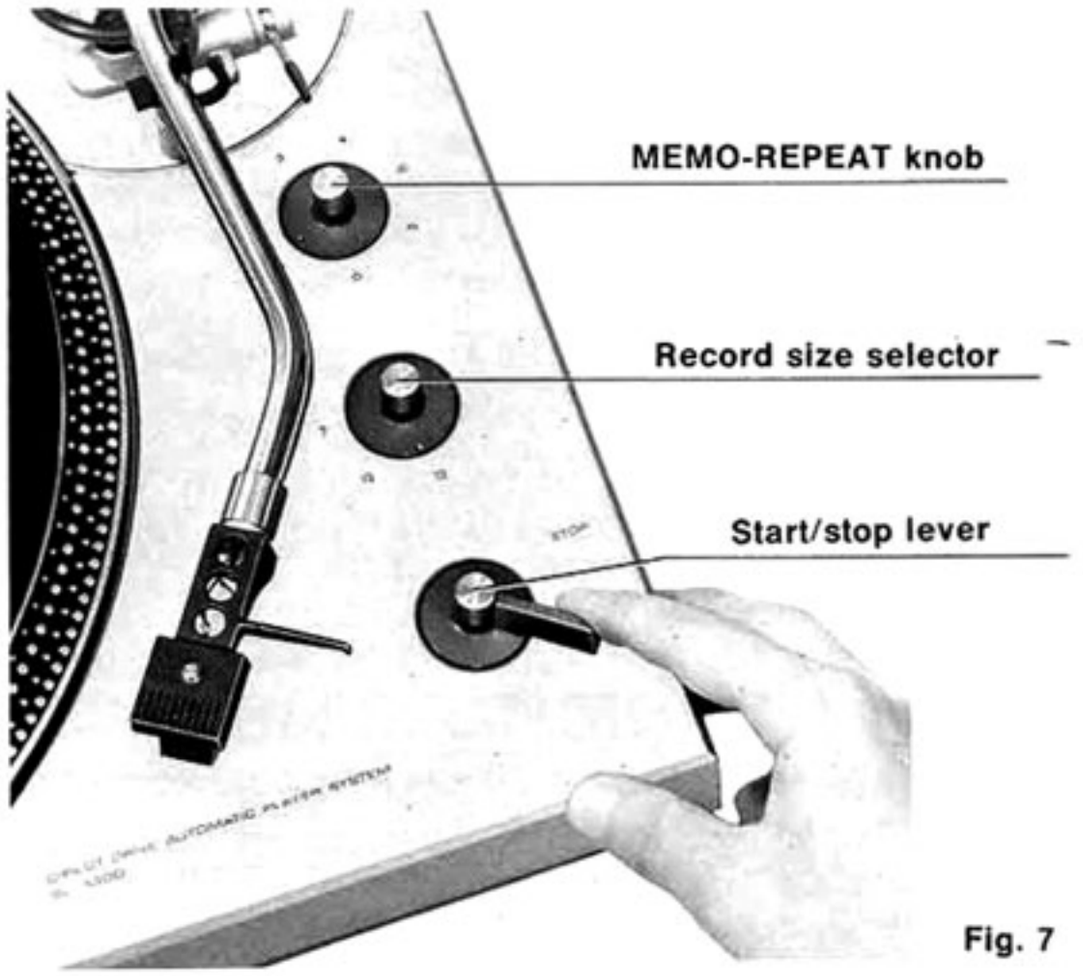

Fig. 7

5 CONNECTIONS

CONNECT TO THE AC POWER SOCKET

Connect the AC power plug to the AC socket of 120V.
This set is designed to be used at AC 120V.
Never connect to the DC power socket or other voltage socket.
If you connect the power plug to the AC outlet such as amplifiers have, confirm the voltage and wattage of rating at the outlet.

CONNECT TO THE AMPLIFIER

Connect the output terminals to the same channels of the amplifier.

OUTPUT TERMINALS		AMPLIFIER
R (U-shaped)	—— R	Channel
L (White)	—— L	Channel
E (U-shaped)	—— GND	

NOTE
Be sure to connect the ground terminal to the amplifier or to the chassis.
If this connection is incomplete, a power source "HUM" will result.

6 OPERATION

AUTOMATIC PLAYING

Release the arm clamp, so that the tonearm becomes free from the arm rest.
Set the MEMO-REPEAT knob to the "**O**" position.
"**R**" position is continuous repeat play.
Set the record size selector to the diameter of the record you wish to play.
Set the speed selector in the same manner as for record size selector.
Pull the start/stop lever to the start position, then playing will start automatically. **(See Fig. 7)**
When playing has finished, the tonearm will return to its rest and the unit will shut off automatically.

MANUAL PLAYING

Release the arm clamp and raise the cueing lever. **(See Fig. 8)**
Place the tonearm over the lead-in groove, causing the turntable platter to rotate.
Lower the cueing lever, then the tonearm will descend to the record surface slowly and playing will begin.
When playing has finished, the tonearm will return to its rest and the unit will shut off automatically.
Of course, it is possible to return the tonearm to its arm rest manually, then the unit will shut off automatically.

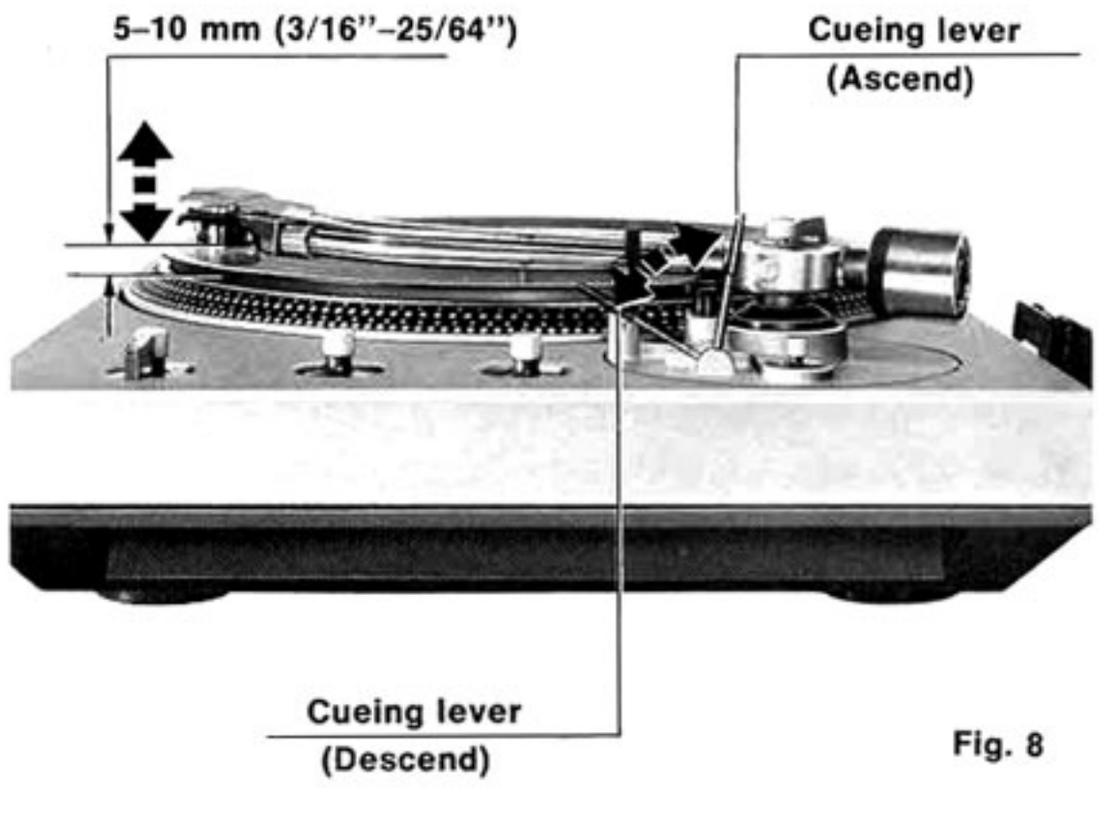

Fig. 8

TO INTERRUPT PLAYING

Raise the cueing lever, then the tonearm will ascend and interrupt playing.
If you lower the cueing lever, the tonearm will descend slowly on the record and resume playing in the same groove.

7 NOTES

❶ **BE SURE TO RELEASE THE ARM CLAMP BEFORE OPERATING THE START/STOP LEVER**

❷ **OPERATE BY MANUAL FUNCTION EXCEPT FOR STANDARD SIZE (17, 25, 30 cm), (7'', 10'', 12'')**
The stylus set-down point of this set is adjusted for standard record sizes only.

❸ **DO NOT GRASP OR HOLD THE TONEARM WHILE AUTOMATIC MECHANISM IS OPERATING**

❹ **DO NOT CONNECT THE AC POWER PLUG OR TURN THE SWITCH ON (THE STROBO ILLUMINATOR/PILOT LAMP IS LIT) WHILE REMOVING TURNTABLE PLATTER**
For any reason, if you remove the turntable platter, be sure to disconnect the AC power plug or turn the switch off (The strobo illuminator/pilot lamp is not lit).

❺ **NEVER REMOVE THE TURNTABLE PLATTER UNNECCESSARILY**
The turntable platter of this set also plays the part of the rotor of the motor. Never remove the turntable platter unneccessarily. This results in a deterioration of characteristics caused by attracting dust or iron filings to the magnet rotor.

8 MAINTENANCE

❶ **WIPE THE DUST COVER WITH ONLY A SOFT, DRY CLOTH**
Do not use any cleaner containing alchol, benzine or thinner.
If, for any reason, oil adheres to the dust cover, first disconnect the AC power plug or remove the dust cover and wipe the dust cover with a cloth containing water.

❷ **APPLY TWO OR THREE DROPS OF OIL TO THE MOTOR SHAFT**
Disconnect the AC power plug and remove the turntable platter.
Lubricate two or three drops of oil to the turntable shaft.
It is sufficient to lubricate the set once after approximately 2000 hours of use.
This period is much longer than the ordinary motors, so do not apply too much oil, nor more frequent than neccessary.

NOTE
Never use any other type of oil.
The bearing parts of this set are designed with an ultra-precise finish to prevent the generation of "**WOW** and **FILUTTER**".
A special oil has been used to maintain the high performance efficiency of this set by forming a uniform film of oil over the parts. For this reason, use only the oil included with this set for its lubrication.

9 SPECIFICATIONS

(TURNTABLE SECTION)

Type	Automatic player system with MEMO-REPEAT
Driving method	Direct drive
Motor	Ultra low speed brushless DC motor
Turntable platter	Aluminium die-cast; 33 cm (13'') diameter 250 kg-cm² (86.2 lb-in²) inertial moment, 1.75 kg (3.86 lb) weight
Turntable speeds	33-1/3 and 45 r.p.m.
Speed change method	Electronic change
Variable pitch controls	Individual adjustment by variable resistor, 10% adjustment range
Wow and flutter	0.03% (W.R.M.S.)
Rumble	−50 dB (DIN A), −70 dB (DIN B)

(TONEARM SECTION)

Type	Universal "S" shaped pipe arm, static-balanced type, direct reading stylus pressure adjustment, with anti-skating force control device, cueing device
Effective length	230 mm (9-1/16'')
Overhang	15 mm (19/32'')
Tracking error angle	Within +3° (at the point 150 mm (5-1/8'') from the center) +1° (at the point 55mm (2-3/16'') from the center)
Offset angle	21.5°
Adjustable stylus pressure	0–3 g
Cartridge range	4.5–9 g 8.5–13 g (with auxiliary weight)
Head shell weight	9.5 g

(GENERAL)

Power supply	120 V, 50/60 Hz
Power consumption	4W 6.5W (While automatic mechanism is operating)
Dimensions	45.3 × 36.6 × 13.9 cm (W × D × H) (17-3/4'' × 14-3/8'' × 5-1/2'') (W × D × H)
Weight	9.4 kg (20.7 lb)

10 FEATURES
(TURNTABLE SECTION)

❶ TURNTABLE PLATTER ITSELF THE ROTOR OF THE MOTOR
The direct drive principle innovated by TECHNICS, which has altered the course of turntable development, has now been carried a step further. Not only does the **SL-1300** feature automatic player system, but it incorporates an ingenious redesign of the direct drive motor itself.
The result is to connect the motor to the turntable platter directly, of course, there is no reduction or transmission mechanism such as a belt or idler.
The turntable platter itself is part of the motor.
In addition, the motor rotates at the same speed of the records. Wear of parts is, therefore, reduced to the extreme minimum, and high performance can be maintained.
Thus, there is no "**WOW** and **FLUTTER**" caused by a transmission mechanism. There is no vibration because this motor has no high speed rotation mechanism. The rumble is extremely low.

❷ NO EFFECT FROM FLUCTUATIONS OF THE POWER SUPPLY FREQUENCY
Since the motor is the DC brushless motor, the rotation speed does not depend on the power supply frequency.
And, the motor power consumption is only 0.1 W, which is less than 1/100th that of a conventional AC motor, therefore, there is no effect from electro magnetic vibration.

❸ ELECTRONIC STABILIZATION CONTROL
This set includes special circuitry to stabilize the speed electrically. Speed stability is extremely good.

❹ NEW AUTOMATIC PLAYER SYSTEM CAN BE OPERATED FIVE FUNCTIONS
This player system features such operations as auto-lead in, auto-return, auto-cut, auto-repeat and manual operation.
And, **MEMO-REPEAT** mechanism is an especially outstanding feature. A record may be played once or up to five times—or repeated indefinitely. This unique function is not matched by any other type of repeat-play record system in a home player.
Just set the **MEMO-REPEAT** knob to the desired number.

❺ SMOOTH, FEATHER-TOUCH MECHANISM, IN COMBINATION WITH PRECISION PARTS AND INGENIOUS CONSTRUCTION
The automatic mechanism uses precision molded plastic parts, in order to avoid the noise caused by automatic operation.
In addition, each operation knob is finished precisely, so it can be operated by a feather touch.
And, there is no skipping or skating caused by operation.

❻ EASY-VIEW STROBO
Two sets of strobo dots appear on the tapered rim for 33-1/3 and 45 r.p.m. at both 50 and 60 Hz synchronization, with either type of AC source. The prism strobo illuminator lights when switch is on, thus serving as a pilot lamp.
The combination of prism lamp and tapered strobo rim results in easy viewing from any position.

❼ ALUMINIUM DIECAST BASE
The appearance of the SL-1300 is enhanced by the attractively styled die-cast aluminium base and compact finish.

❽ EFFICIENT, LOW-POWER OPERATION
The motor power consumption is only 0.1 W and total power consumption is less than 4 W. (While automatic mechanism is operating is 6.5W)
This is most important in terms of longer life and reliability.
That is more than the saving of a few pennies of electrical power, but means less heat, less vibration, less stress on the control circuitry and less evaporation of lubricants.
The result is not merely longer motor life, which may be achieved in other direct drive designs, but longer life of the entire component assembly.

(TONEARM SECTION)

❶ HIGH QUALITY UNIVERSAL TONEARM
This tonearm is especially designed for the **SL-1300**, using four pairs of pivot bearings to enhance the rotational sensitivity of the gimbal-suspended type.
Thus it can accept any cartridges, stylus pressure of which is at 0.25 gram.

❷ SIMPLE AND EASY STRUCTURE OF THE HEAD SHELL
The head shell is finished of die-cast aluminium to prevent vibration.
The structure of this shell is simple, so that the installation of the cartridge and the adjustment of the overhang are easy and foolproof.

❸ LOW-CAPACITANCE PHONO CABLES
High-frequency audio losses are eliminated and discrete 4-channel (CD-4) records can be played through a suitable cartridge with no deterioration in carrier frequencies.

❹ FEATHER-TOUCH CUEING
Feather-touch cueing is viscous-damped in both directions for gentle descent and ascent.
The tonearm will be set down exactly on the groove you desired, thus protecting the stylus tip from damage.

❺ EASY ADJUSTMENT OF STYLUS PRESSURE
The stylus pressure adjustment is easy because of helical type of movement, just turning the balance weight can adjust the stylus pressure accurately.

❻ PRECISION ANTI-SKATING FORCE CONTROL DEVICE
By precision design, the inside force is canceled accurately.

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